



PUBLIC TRANSPORTATION

DATA SOFTWARE





HELLO!  
                    

**We are group 9**

Hyvää päivää



THIS IS WHAT WE'VE DONE



## PROJECT'S PROGRESS

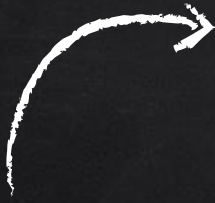
PESTE

Stakeholders

Completed  
phase 1

Requirements  
gathering plan

Requirements





## WHAT IS THE SOFTWARE ACTUALLY?

- X It's a system that collects, analyses, and displays public transportation data of the city of Tambester
- X It's used to enhance the services



TICKET SELLING SYSTEM



AI



TRACKING SYSTEM



CLOUD SERVICE



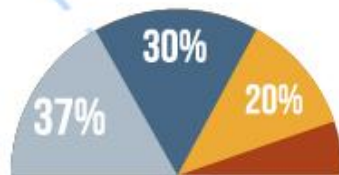
PUBLIC TRANSPORT



PUBLIC TRANSPORTATION DATA SOFTWARE



SMART CITY



REVENUE ANALYSIS



2.

HERE IS THE RESULT OF PESTE ANALYSIS



PESTE consists of political, economic, social,  
technological, and environment

# POLITICAL

- X Vehicle quota
- X New tax policies
- X Changes in roads made by government
- X Government's subsidies





X Ticket price

X Labour costs (for developers, managers, ...)

X Changes in fuel prices

X Economic growth patterns



X Lifestyles

X Educational levels

X Age distribution



# TECHNOLOGICAL

X Cybercrime

X Introduction of new technologies

X Database capacity

X Technology level in the country

# ENVIRONMENTAL

X Power consumption of data centers

X Climate change

X Air pollution

X Rapid development of environmentally-friendly vehicles



STAKEHOLDER ANALYSIS...



## Stakeholder : FINANCIERS

Stakeholder class	Stakeholder	Role	Required participation	Impact level (from product)	Areas of influence
Financiers	Banks	Sponsor	Steering group meetings, planning, requirement	Low	Goals
	Personal investors	Financier		Medium	Risks, funding, goals
	Government	Sponsor, controlling taxes		High	Taxes. business restrictions, goals, regulations



## Stakeholder : ORGANIZATIONS

Stakeholder class	Stakeholder	Role	Required participation	Impact level (from product)	Areas of influence
Organizations	City councils	Enacting laws	Planning, requirement	High	Goals, administration
	Con-salting Oy	UX/UI experts + consultants	Planning, requirement, design	Medium	Interface, consultancy
	Public transportation companies	Vehicle providers	Testing, operation	Medium	Goals
	Telecommunication companies	Connection infrastructure providers	All phases	Medium	Functionality

## Stakeholder: DEVELOPERS

Stakeholder class	Stakeholder	Role	Required participation	Impact level (from product)	Areas of influence
Developers	Software developers	Software builders	All phases	High	Functionality
	Network engineers	Network maintainers and administrators	Prototyping, development, operation, maintenance	Medium	Functionality
	UX/UI designers	Graphic designer	Design, maintenance	Medium	Interface, functionality
	Maintainers	Fixing bugs, regular maintainers	Maintenance	Medium	Usability, functionality
	Testers	Testing functionalities	Testing	Medium	Functionality

# Stakeholders: ANALYSTS & WORKERS

Stakeholder class	Stakeholder	Role	Required participation	Impact level (from product)	Areas of influence
Analysts	Data scientists	Data analysts, trends detector, implement future predictor	Operation	Medium	Analytic, data
	Financial analysts	Data analysts, trends detector, implement future predictor		Medium	
Workers	Drivers	Transportation drivers, data contributors	Operation	Low	Goals
	Human Resource Department	Recruiting and placing workers Bus maintainers, cleaners	Planning Operation	Low	Human resource
	Bus maintenance crew	Recruiting and placing workers Bus maintainers, cleaners	Planning Operation	High	Services

# Stakeholders: CUSTOMERS & LEGAL-RELATED

Stakeholder class	Stakeholder	Role	Required participation	Impact level (from product)	Areas of influence
Customers	End-users	Users	Testing, operation	High	Revenue
	Traffic bureau			High	Revenue, traffic solutions
	Environmental bureaus			Medium	Revenue
	Traffic planners			High	Revenue
Legal-related	Lawyers	Legal proceedings representatives, advisors	Planning	Medium	Legals, intellectual property
	Lawmakers	Drawing up legal documents		Medium	Policies, legals

# Stakeholder: MANAGERS & MEDIA

Stakeholder class	Stakeholder	Role	Required participation	Impact level (from product)	Areas of influence
Managers	Project managers	Monitoring, documenting, planning, budgeting,... the project	All phases	High	Administration, technical restrictions
	CEO	Developing business strategies, overseeing all operations and business activities	Planning	High	Administration
	Financial managers	Reviewing financial reports, monitoring accounts, analysing market	Planning, operation	Medium	Finance, business restrictions, administration
	CTO	Outlining vision, implementing technical strategies, controlling technical resources	Planning, deployment	High	Administration, technical restrictions
Media	Newspapers	Public opinion controllers, spreading news	Marketing, in the end of project	Medium	Public opinion
	Social networks				

# Stakeholder: COMMUNITY

Stakeholder class	Stakeholder	Role	Required participation	Impact level (from product)	Areas of influence
Community	Similar products' owners	Competitors	Planning, requirement, at the beginning	High	Market, revenue, intellectual property
	Ticket buyers (not end-user)	Data contributor	Testing, operation	Low	Data
	Private car owners	Data contributor	Testing, operation	Low	Data



SOME PRELIMINARY REQUIREMENTS





# FUNCTIONAL

- X System can collect data about routes, times, tickets, and environment
- X There is a simulator to approximate and show the results of new route combinations
- X System can update, add, and delete routes when users are using planning route function
- X User's interface should contain information about times and routes that are most full or delayed
- X System can generate reports about the usage of transportation and ticket revenue on the first day of new months



# NON-FUNCTIONAL

- X All data is public
- X Route information should be returned to user within 3 seconds
- X The simulator can run on low-setting computers, e.g. computers with Intel i3
- X The revenue data should be reported in total sum and in per route form



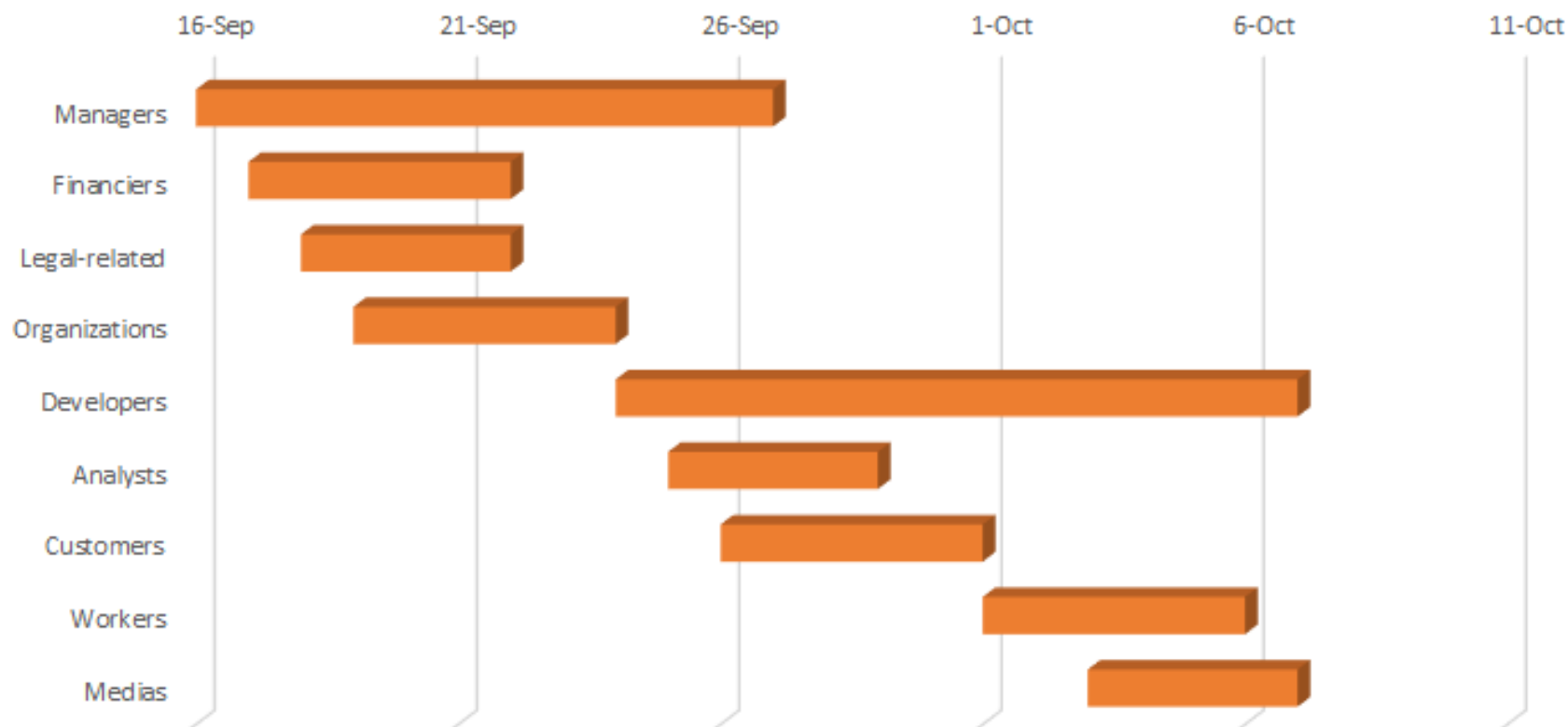
# RESTRICTIONS

- X System has connection to ticket system and tracking system in the vehicles
- X AI can be integrated into system in the future without crashing it
- X System must have a separate interface for passengers

5.

FINALLY, REQUIREMENTS GATHERING PLAN

## Requirements gathering timetable



	Medias	Workers	Customers	Analysts	Developers	Organizations	Legal-related	Financiers	Managers
Start day	3-Oct	1-Oct	26-Sep	25-Sep	24-Sep	19-Sep	18-Sep	17-Sep	16-Sep
Days to Complete	4	5	5	4	13	5	4	5	11

Stakeholder	Method	Person responsible
Managers	Brainstorming, Meetings	Manager of all company departments
Financiers	Brainstorming, Meetings	Manager and finance department
Legal-related	Meetings	Legal department
Organizations	Meetings	Administrative department
Developers	Brainstorming, Meetings, use cases, prototyping	Managers
Analysts	Facilitated sessions	Managers
Customers	Use Cases, Group interviews and Questionnaires, Prototyping	IT-department, Finance department, Business analysts
Workers	Group interviews, Questionnaires	Business analysts, IT-department
Medias	Meetings	Public relations
Managers	Brainstorming, Meetings	Manager of all company departments

THANKS FOR LISTENING

WHY DON'T YOU CLAP YOUR  
HANDS?





THANKS!

**Any questions?**